in his "Harmonies of the World," "The die is cast! The book is written! It can well afford to wait a century for a reader, since God has waited 6,000 years for the astronomer."—[C. A.]

WINSLOW UPTON, 1853–1914.

We regret to note the death of Prof. Winslow Upton, on January 8, in the sixty-first year of his age. He will be remembered by many in the Weather Bureau as an active member of the "Study Room" established by Gen. W. B. Hazen, as Chief Signal Officer, in January, 1881. Although Professor Upton was with us only a few years, yet his activity and his extensive knowledge contributed greatly to the usefulness of this official effort to introduce a higher scientific standard into the work of the Weather Bureau. When President Garfield appointed General Hazen the Chief Signal Officer, intrusted with the conduct of the Weather Bureau, the latter was urged by the lamented President "to give the right hand of fellowship to science as such." It was in obedience to this advice that Winslow Upton was drawn from the Naval Observatory into the Weather Bureau of the Signal Office. In 1884 he was appointed professor of astronomy at Brown University, and within a few years supervised the construction of the Ladd Observatory, where regular meteorological observations have been kept up. Upton was one of the organizers of the New England Meteorological Society in June, 1884, and most active early contributors to its bulletins. This society was supported by such eminent men as W. H. Niles, W. M. Davis, D. Fitzgerald, E. B. Weston, W. Upton, A. Lawrence Rotch, M. W. Harrington. It also exerted a decided influence in favor of the appointment of M. W. Harrington on July 1, 1891, as the first Chief of the Weather Bureau under its new scientific organization. A similar "Ohio State Meteorological Bureau" had been established April 17, 1882, by action of the State Legislature and attained great usefulness under T. C. Mendenhall as the active president of the board of directors, he being also at that time professor of physics in the State University at Columbus. In those days, under the wise administration of Gen. W. B. Hazen, great interest was manifested in the organization of independent State weather services throughout the country. (See Annual Report of Chief Signal Officer for 1881, pp. 71–72.) But this was soon transmuted into the establishment of State services under the conduct of Weather Bureau officials, and the support of the Chief Signal Officer. The stimulus given to intellectual activity by the establishment of independent services may possibly break up the quiet and homogeneity of routine climatological work, but it does far more good than harm by stimulating every man to see if he can possibly improve on what has gone before. As these independent State services have now almost entirely disappeared and are almost forgotten because merged with the general Weather Bureau official system, we have thought it important to dwell upon Professor Upton's activity in this early organization and his thorough sympathy with the desire to stimulate independent thought. The degree of Ph. D. in the German and in many American universities must be accompanied by a thesis in which the candidate illustrates his own adaptability or power of original investigation, and Prof. Upton's life gave many such evidences of his own gifts, both in astronomy and meteorology.—[C. A.]

THE DRIFT OF A TRAIN OF A BRIGHT METEOR.

Almost the only information that we can obtain with regard to the motions of the highest portions of our atmosphere comes from observing and studying the slow drift of the delicate train of light or luminous dust left behind when a bright meteor passes through the upper air.

The following note from Mr. Frise, of Sheridan, Wyo., shows that the meteor train observed by him January 12 drifted rapidly eastward as its particles settled toward the earth. We should have gained much exact knowledge from this meteor if only observers at other stations could have made records of its appearances as seen by them, but certainly we are authorized to conclude that a strong easterly wind, or possibly from the west by south, must have been prevailing in the upper atmosphere at that time. Prof. C. C. Trowbridge, of Columbia University, calls attention to the value of the information that may be obtained from the phenomena of meteor trains.

Photographic apparatus appropriate to the prompt record of such meteor phenomena has long since been designed and will, it is hoped, become available to observers during the coming year.—[C. A.]

LOCAL OFFICE, U. S. WEATHER BUREAU,
Sheridan, Wyo., Jan. 14, 1914.

As the regular evening observation was being made on the 12th instant my attention was attracted to an optical phenomenon in the west unlike any before observed. No instrument was available for determining the true position, but the desire to locate as accurately as might be done by eye observation came to me at once, so that with the care which that desire prompted, the estimated position is not much in error. The altitude was about 12° to 15° and azimuth about 75°. It was first observed at 5:45 p. m. local time (105th Mer.), and at 6:05 p. m. it was very faint and disappeared at 6:07 p. m. It was apparently a chain of stars about 6° to 10° in length in

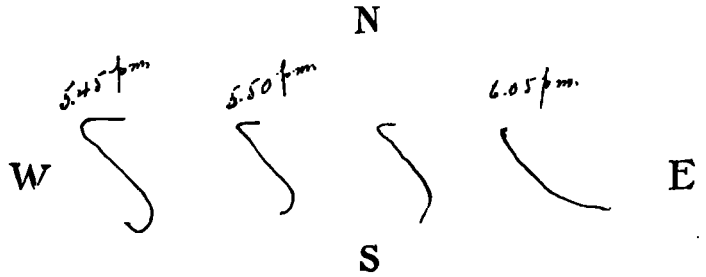

FIG. 1.—Train of meteor at Sheridan, Wyo., Jan. 12, 1914. Appearance of train at 5:15 p. m., 5:50 p. m., and 6:05 p. m.

the form of an imperfect letter *S*, closely resembling the figures accompanying which were drawn as the observation was made. It [the trail] was nearly upright when first seen, but as it shortened and straightened it resembled a shepherd's crook or staff by the time it had become so faint as to be scarcely discernable.

Its light was identical with that of a bright star, no color appearing at any time. With the diminishing brightness of the light it seemed to rise slightly and the lower portion at times seemed to draw up so as to shorten the figure. Whether this was due to actual motion or to an unsteady medium through which its light came was not apparent. But that the shape of the figure was